

Updating the Hull-Scrape Technique ...

By: Craig Kvien, (ckvien@uga.edu) 229.392.3507 in cooperation with Corley Holbrook, Albert Culbreath , and Tim Brenneman

Objective

To help growers and Extension agents better use the hull-scrape peanut maturity profile chart to predict optimum harvest date windows for current SE peanut varieties.

Results:

The 2016 season resulted in varieties producing higher yields over a longer period, and we believe these results were due, in part, to environmental conditions and a stronger fungicide program. This year the Hull-Scrape Board predicted the best digging date for 06G and TUFRunner 287 accurately. For Tifguard, GA 14N and TUFRunner 727 we noted that when the dig prediction was within 14 days to add another 7 days to that prediction and dig on that date. Similarly when TifNV, GA 09B and 12Y predictions were 14 days or less, add another 10 days to that prediction and dig on that date. Since the hull of GA 13M never seems to develop a dark black coloration we found it best to hull scrape that variety from 114 to 121 days after planting and then dig on that prediction. Of course, the predictions are made based on the assumption that the crop and its canopy is in excellent condition and the weather, equipment and labor also looks good.

The table below shows the yield penalty for harvesting too early or too late. The optimum harvest date is shown in green. The penalty for digging GA 06G a week or two later than optimum, was much less (5%), than it was for being a week or two early (10%). The yield results by digging date for the 10 test varieties is below.

2016 Maturity Yield Test by Digging Date (lbs/A)

Entry#	114 DAP	121 DAP	128 DAP	135 DAP	142 DAP	149 DAP	156 DAP	163 DAP
Tifguard	-1878**	-1572	-1742	-1147	-880	6970*	-1022	-600
TifNV	-1820	-1365	-1098	-785	-293	-534	7107	-597
GA06G	-1487	-613	-674	-849	6605	-186	-70	-336
GA09B	-1053	-1031	-760	-816	-119	6010	-248	-116
GA12Y	-3414	-1771	-2158	-634	-837	-172	7251	-245
GA13M	-3011	-1481	-1553	-839	-712	-442	6800	-185
GA14N	-1577	-1610	-1542	-838	-442	-217	6082	-134
TUF 297	-2125	-949	-1140	-198	6904	-11	-419	-468
TUF 727	-1875	-1050	-1008	-309	-425	6430	-38	-489
Flo157	-1187	-792	-797	5119	-266	-177	-6	-616

*Green background highlights the highest yield in lbs/A for each variety over all digging dates

**Cells before and after the green highlighted cell give the difference in yield from the high yield date - calculated as yield at best date (shown in green)– yield at other date = difference

In 2016, we used a premium fungicide page, did a reasonable job irrigating and the harvest season was abnormally dry. Good disease control, irrigation and varieties with a moderate amount of disease resistance enables growers to extend their harvest window with less yield penalty. Our 2015 tests were conducted using a reasonable (chlorothalonil & tebuconazole), yet not premium fungicide program. Some varieties were affected more than others, GA 12Y remained strong, GA 13M suffered from leafspot late in the season, and GA 09B from White Mold, and these conditions resulted in an earlier harvest with lower yields and a greater yield penalty if the optimum digging date was missed.

In 2017 we plan to explore the interaction between disease control, digging date and variety in our refinement of the hull-scrape technique.